

UMDLOTI WASHAWAY REHABILITATION DURBAN, KWA-ZULU NATAL , SOUTH AFRICA

Slope Protection

Problem

In April 2022, intense rainfall events triggered the formation of two large washaways on the Umdloti Dune face. These washaways extended from high points on Bellamont Road in the west to North Beach Road in the east, resulting in extensive erosion of soil, forest habitat, and residential properties. The slip failure averaged a slope-length of 180m and width of 27m. The provided images depict the washaways immediately following the April 2022 rain event. The affected area is part of an elite multi-generational residential development situated on Berea sands, a soil type typical of the Kwa-Zulu Natal region. However, due to steep slopes and uncontrolled stormwater runoff a catastrophic failure occurred.

Solution

The proposed solution aimed to rehabilitate the affected site and restore it to its pre-event biodiversity state, ensuring the return of ecological functionality and promoting soil stability to prevent future erosion and potential failures as much as reasonably possible. The strategy involved engineering the slope to reinstate the eroded dongas using stabilized fill. Subsequently, erosion control measures were implemented.

To accomplish this, the initial steps involved shaping the soil, providing soil protection, and replanting to establish adequate erosion control measures and guide the impacted areas toward their original ecological integrity.

Maccaferri Biojute 250 was utilized in conjunction with fascine work, berms, branches, and soil. The preparation specification assumed that the upper soil surface predominantly consisted of Berea Red soils with limited to no clay-based topsoil. It is important to note that this solution was temporary, focusing on facilitating rapid vegetation growth for effective erosion control.

Client: EThekweni Municipality

Designer / Consultant: Environmental Planning Department

Contractor: Devru Construction & Super Turf

Products used (Qty.)

- BioMaterials 39,000sqm

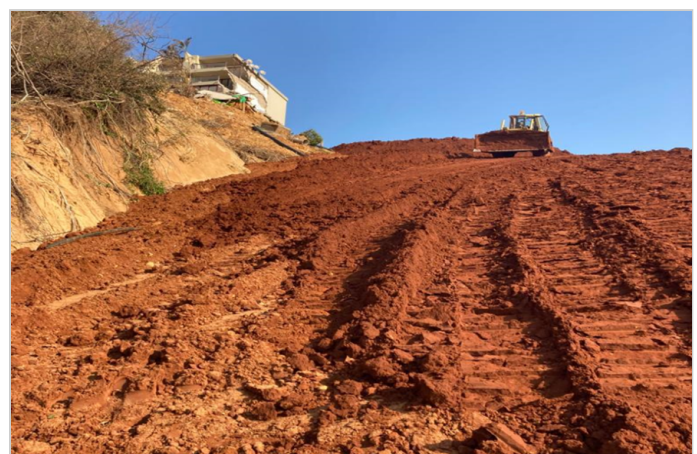
Date of construction: 06/2022 - 10/2022

[Google Maps](#)

[Google Earth](#)



Before Construction



During Construction



During Construction



Project Completed



Samsung Quad Camera
Shot with my Galaxy A72

Project Completed



Project Completed

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